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09/719,958	03/23/2001	George Leonard Powell	2497/102	5246

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EXAMINER	
BROWN, VERNAL U	
ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/719,958	POWELL, GEORGE LEONARD	
	Examiner	Art Unit	
	Vernal U Brown	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/12/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to communication filed on October 10, 2004.

Response to Amendment

The examiner has acknowledged the amendment of claims 1 and 10.

Response to Arguments

Applicant's arguments filed December 21, 2004 have been fully considered but they are not persuasive.

Regarding applicant's argument on page lines 4-8 concerning the interrogation signal comprising a plurality of portion, Denne et al. teaches an interrogation signal comprising a plurality of portions and each portion is formed by a sequence of bits (figure 1). Denne et al. also teaches comparing (associating each portion with the identification word) the received identification signal with the stored identification signal in the transponder in order to identify the transponder (col. 8 lines 15-19).

Regarding applicant's argument concerning the different format of the interrogating signal on page 10 lines 4-8, Denne et al. teaches transmitting a modulated or non-modulated interrogating signal that represents different signal format (col. 4 lines 26-29, col. 4 lines 30-40).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-17, the examiner is unable to determine what are the two signal formats used by the transceiver as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4-6, 8-17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denne et al. U.S Patent 4691202 in view of Dodd et al. U.S Patent 5339073 and further in view of Walter et al. U.S Patent 5856788.

Regarding claims 1 and 10, Denne et al. teaches a radio frequency tag identification system comprising a plurality of tags and a transceiver for sending information to and receiving information from the tags (col. 7 lines 19-24), wherein each tag is allocated an identification word comprising a predetermined number of bits (col. 5 lines 39-44), the tags comprising means (82) for selectively modulating a signal received from the transceiver (col. 6 lines 33-39), and the transceiver (10) comprising means (Tx1) for sending an interrogation signal comprising a

plurality of portions (figure 1), wherein each portion is associated with a predetermined bit, or bit sequence, of the identification words and is used to simultaneously interrogate the tags to identify, in response to modulated signals provided by the tags, the presence of a tag or tags having a given value at the predetermined bit or bit sequence (col. 4 lines 4-12, col. 8 lines 15-19). Denne et al. teaches transmitting a modulated or non-modulated interrogating signal that represents different signal format (col. 4 lines 26-29, col. 4 lines 30-40). Denne et al. is however silent on teaching each portion of the interrogation signal determined by the transponder is dependent upon the response of the tag. Dodd in an art related transponder system teaches each portion of the interrogation signal determined by the transponder is dependent upon the response of the tag (col. 4 lines 16-25, col. 4 lines 30-45) in order to isolate and identify the tag. Denne et al. in view of Dodd et al. is however silent on teaching the tag is deactivated when it does not have the value of the identification word at the predetermined bit sequence. Walter et al. in an art related radio frequency identification tag invention teaches a method of identifying a tag that includes deactivating the tag when it does not have the value of the identification word at the predetermined bit sequence (figure 2).

It would have been obvious to one of ordinary skill in the art for each portion of the interrogation signal determined by the transponder is dependent upon the response of the tag and to deactivate the tag when it does not have the value of the identification word at the predetermined bit sequence in Denne et al. as evidenced by Dodd et al. in view of Walter et al. because Denne et al. suggests identifying radio frequency tags within an electromagnetic field based on the response received from the tag and Dodd et al. teaches a method of identifying the tags in an electromagnetic that includes each portion of the interrogation signal determined by

the transponder is dependent upon the response of the tag in order to isolate and identify the tag. Walter et al. further teaches a method of identifying the tags in an electromagnetic by using a bitwise interrogation and deactivating the tag when it does not have the value of the identification word at the predetermined bit sequence.

Regarding claim 4, Denne et al. teaches the use of capacitor plates that will convert the electric power into electric field (col. 5 lines 42-48).

Regarding claim 5, Denne et al. teaches an antenna formed by L2 for communicating with the transceiver.

Regarding claim 6, Denne et al. the transceiver includes means for determining the nature of the modulation based on the logical outcome of previous communications with tags to conduct a binary search (col. 7 lines 1-4).

Regarding claim 8, Denne et al. teaches a tag comprising signal pickup means (L1), data extractor (34) modulator (82), a logic section (80) and a clock extraction section performed by the demodulator (col. 3 lines 30-33).

Regarding claim 9, Denne et al. teaches the signal pickup means comprises a coil (L1).

Regarding claim 11, Denne et al. teaches the presence of tags having an individual identification word is detected by sending an interrogation signal having portions corresponding to all bits of the identification words (col. 8 lines 10-25).

Regarding claims 12-13, Denne et al. in view of Dodd et al. teaches transmitting an interrogating signal comprising a plurality of portions (figure 1) but is silent on teaching each portion comprises a first part which is used to interrogate the tags to determine whether a tag contain the associated bit or sequence of bits has a first value, and a second part which is used to

interrogate the tags to determine whether the associated bit or sequence of bits has a second value. Walter et al. in an art related radio frequency identification tag invention teaches an interrogation signal comprising a first part which is used to interrogate the tags to determine whether a tag contain the associated bit or sequence of bits has a first value, and a second part which is used to interrogate the tags to determine whether the associated bit or sequence of bits has a second value (col. 4 lines 27-38) in order to determine the identification number of a plurality of radio frequency tag.

It would have been obvious to one of ordinary skill in the art for each portion of the interrogation signal to comprise a first part which is used to interrogate the tags to determine whether a tag contain the associated bit or sequence of bits has a first value, and a second part which is used to interrogate the tags to determine whether the associated bit or sequence of bits has a second value in Denne et al. in view of Dodd et al. as evidenced by Walter et al. because Denne et al. in view of Dodd et al. suggests transmitting an interrogating signal comprising a plurality of portions and identifying the transponders in the interrogation field and Walter et al. teaches an interrogation signal comprising a first part which is used to interrogate the tags to determine whether a tag contain the associated bit or sequence of bits has a first value, and a second part which is used to interrogate the tags to determine whether the associated bit or sequence of bits has a second value in order to determine the identification number of a plurality of radio frequency tag.

Regarding claim 14, Denne et al. comparing the receive bit sequence with the bit sequence stored in memory (col. 8 lines 15-18) but is silent on teaching a tag not having the value at the predetermined bit or bit sequence ignores further signals until an activation or a

wake signal is received. Walter et al. in an art related radio frequency identification tag invention teaches a tag not having the value at the predetermined bit or bit sequence ignores further signals until activation or a wake signal is received (col. 4 lines 30-31).

It would have been obvious to one of ordinary skill in the art for a tag not having the value at the predetermined bit or bit sequence ignores further signals until activation or a wake signal is received in Denne et al. as evidenced by Walter et al. because Denne et al. suggests a transponder responding to it received identification signal and Walter et al. teaches a tag not having the value at the predetermined bit or bit sequence ignores further signals until an activation or a wake signal is received so as to allow the other tags in the interrogation field to be identified.

Regarding claim 15, Denne et al. teaches the tag deactivates and ignores further signals until an activation signal is received (col. 8 lines 18-20) and (col. 6 lines 56-59).

Regarding claim 16, Denne et al. teaches a tag can determine if the reader transceiver has received its attempted communication based on subsequent interrogation signals (col. 8 lines 11-16).

Regarding claim 17, Denne et al. in view of Dodd et al. teaches transmitting an identification signal to the transponder as discussed in the response to claim 1, but is silent on teaching sending a second part of an interrogation signal if no response to the first part is received. Walter et al. in an art related radio frequency identification tag invention teaches sending a second part of an interrogation signal if no response to the first part is received (col. 4 lines 31-34) in order to identify the tags in an interrogating field.

It would have been obvious to one of ordinary skill in the art to send a second part of an interrogation signal if no response to the first part is received in Denne et al. in view of Dodd et al. as evidenced by Walter et al. because Denne et al. in view of Dodd et al. suggests identifying the transponders in an interrogation field and Walter et al. teaches identifying the transponders in an interrogation field by sending a second part of an interrogation signal if no response to the first part is received in order to identify the tags in an interrogating field.

Regarding claim 23, Denne et al. teaches the interrogation and response sequence is computer controlled (col. 8 lines 32-35).

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denne et al. U.S Patent 4691202 in view of Dodd et al. U.S Patent 5339073 in view of Walter et al. U.S Patent 5856788 and further in view of Wood, Jr. U.S Patent 6466771.

Regarding claim 2, Denne et al. in view of Dodd et al. in view of Walter et al. teaches an antenna coil (L2) and the transponder (tag) communication in the radio frequency range (col. 5 lines 35-36) but is silent on teaching an antenna array and an external data communication port. Wood, Jr. in an art related invention in the same field of endeavor of transponder communication system teaches transceiver comprising an antenna array and an external data port connected to a PC (figure 5).

It would have been obvious to one of ordinary skill in the art to have an antenna array and an external data communication port in Denne et al. in view of Dodd et al. in view of Walter et al. as evidenced by Wood, Jr. because Denne et al. in view of Dodd et al. in view of Walter et al.

suggests a transceiver communicating via an antenna and Wood, Jr. teaches a transceiver using an antenna array and a communication port as a communication means.

Regarding claim 3, Denne et al. teaches generating modulated signal (col. 7 lines 64-66) and the frequency of operation is 2.5Mhz (col. 5 lines 35-36) which is in the radio frequency range of operation.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Denne et al. U.S Patent 4691202 in view of Dodd et al. U.S Patent 5339073 in view of Walter et al. U.S Patent 5856788 and further in view of Pidwerbetsky et al. U.S Patent 6046683.

Regarding claim 7, Denne et al. in view of Dodd et al. in view of Walter et al. teaches the transceiver including means for detecting the modulation impressed on the field by any tag (col. 7 lines 1-4) comprising a demodulator (col. 7 lines 44-45) and the data is fed to a CPU (18) and further teaches the transponder uses an amplifier (32) to amplify the received signal and the receive signal is sent to a processor (50) as shown in figure 3 but is silent on teaching the transceiver comprises an amplifier, wherein the modulation signal is sent to a processor in a logic block and is digitized within a logic processor and evaluated in the transceiver which forms the interrogating unit. Pidwerbetsky et al. in an art related invention in the same field of endeavor of transponder system teaches the transceiver comprises an amplifier, wherein the modulation signal is sent to a processor in a logic block and is digitized within a logic processor and evaluated in the transceiver that forms the interrogating unit (col. 4 lines 23-29).

It would have been obvious to one ordinary skill in the art for the transceiver to comprise an amplifier, wherein the modulation signal is sent to a processor in a logic block and is digitized within a logic processor and evaluated in the transceiver that forms the interrogating unit in

Denne et al. in view of Dodd et al. in view of Walter et al. as evidenced by Pidwerbetsky et al. because Denne et al. in view of Dodd et al. in view of Walter et al. suggests teaches the transponder which performs the function of transmitting and receiving signals uses an amplifier (to amplify the received signal and the receive signal is sent to a processor and evaluated and Pidwerbetsky et al. teaches a transceiver formed by an interrogating unit comprising an amplifier, wherein the modulation signal is sent to a processor in a logic block and is digitized within a logic processor and evaluated in the transceiver.

Claims 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dodd et al. U.S Patent 5339073 in view of Walter et al. U.S Patent 5856788.

Regarding claim 18, Dodd et al. teaches a method of identifying tags within a target area using a communication signal having a plurality of portions (figure 6), each portion being of a substantially continuous first duration representing a first value of the transponder code, each tag being allocated an identification word comprising a predetermined number of bits (col. 5 lines 7-10), for each bit of the identification word, the method comprising the steps of:

transmitting from a transmitter a first communication signal comprising a plurality of portions, each portions is associated with a predetermined bit of the identification word (col. 5 lines 15-27);

(b) receiving the signal at a tag and, if the identification word of the tag has the value at the respective bit and if the tag is not deactivated, modulating the signal at the tag and sending a response (col. 5 lines 15-20);

(c) monitoring at the transmitter the signal for modulation evidenced by the receiving of the response from the tag (col. 5 line 24) and the modulation of the reply signal (col. 4 lines 1-3),

(c 1) if modulation is detected, recording the presence of at least one tag having the first value at the respective bit (col. 5 lines 24-27). The method of identifying the tag as claimed in steps (c2) to (g) is evidenced by the interrogator conducting a search by simultaneously interrogating the bits of all transponders within range in a serial manner as outlines in column 5 lines 15-56). Dodd et al. teaches the tag does not send a respond when a valid search pattern is not received (col. 5 lines 15-24) but is not explicit in teaching deactivating the tag. Walter et al. in an art related radio frequency identification tag invention teaches a method of identifying a tag that includes deactivating the tag when the tag has the second value at the respective bit which does not receive an extended communication signal portion (col. 4 lines 27-37).

It would have been obvious to one of ordinary skill in the art to deactivate the tag having the second value at the respective bit which do not receive an extended communication signal in Dodd et al. as evidenced by Walter et al. because identifying the tags in an electromagnetic that includes each portion of the interrogation signal determined by the transponder is dependent upon the response of the tag in order to isolate and identify the tag and Walter teaches the method of deactivating the tag when the tag has the second value at the respective bit which does not receive an extended communication signal portion in order to isolate the tag for identification.

Regarding claim 19, Dodd et al. teaches the tag is deactivated when a valid search pattern is not received by not sending a response and is reactivated when a valid search pattern is received (col. 5 lines 15-24).

Regarding claim 20, Dodd et al. teaches a tag having each bit of its identification word transmitted is configured to accept read/write commands, the method further comprising the step

of reading from and/or writing to the tag by transmitting signals from the transmitter as evidenced by the programming of the tag (col. 6 lines 61-65).

Regarding claim 22, Dodd et al. teaches the interrogation and response sequence is computer controlled (col. 2 lines 55-59).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dodd et al. U.S Patent 5339073 in view of Walter et al. U.S Patent 5856788 and further in view of Denne et al. U.S Patent 4691202.

Regarding claim 21, Dodd et al. in view of Walter et al. teaches switching the transponder to a standby mode (col. 7 lines 5-7) but is not explicit in teaching deactivating the tag after the reading and/or writing is completed. Denne et al. in an art related identification system teaches deactivating the tag after the reading and/or writing is completed (col. 8 lines 16-19) as a power conservation measure.

It would have been obvious to one of ordinary skill in the art to deactivate the tag after the reading and/or writing is completed in Dodd et al. in view of Walter et al. as evidenced by Denne et al. because Dodd et al. in view of Walter et al. suggests switching the transponder to a standby mode and Denne et al. teaches deactivating the tag after the reading and/or writing is completed as a power conservation measure.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vernal Brown
February 8, 2005

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